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ABSTRACT

The South Central Research Library Council was asked if the services of the Bibliographic and Reference Center, a subsidiary of the Council, located at the Cornell University Libraries could be extended to libraries outside its region. To date, the Center has been handling a limited number of requests from non-member libraries without interfering with the quality of its service or the turn-about time promised to the member libraries in SCRLC. However, a question did arise regarding its ability to search bulk requests for five major university libraries in FAUL (Five Associated University Libraries) with the present staff of 2 1/2 (1 professional; 1 1/2 clerical). In order to determine the size of the load which the staff can handle and in order to arrive at a price for service to non-member libraries, a time/cost study was made which is described in this report. The results of the study indicate that the Center staff can search for other institutions with its present manpower. The recommended charge per search is $0.50 for non-member libraries. (Author/SJ)

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TIME/COST STUDY

OF A BIBLIOGRAPHIC SEARCH

by

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TIME/COST STUDY OF A BIBLIOGRAPHIC SEARCH

BACKGROUND

The South Central Research Library Council was asked if the services of the Bibliographic and Reference Center, a subsidiary of the Council, located at the Cornell University Libraries could be extended to libraries outside its region. To date, the Center has been handling a limited number of requests from non-member libraries without interfering with the quality of its service or the turn-about time promised to the member libraries in SCRLC. However, a question did arise regarding its ability to search bulk requests for five major university libraries in FAUL (Five Associated University Libraries) with the present staff of 2 1/2 (1 professional; 1 1/2 clerical). In order to determine the size of the load which the staff can handle and in order to arrive at a price for service to non-member libraries, the following time/cost study was made.

METHODOLOGY

The Bibliographic and Reference Center would time the search for three hundred plus requests submitted by the University of Rochester. The results of the time study made by the BARC staff would then be compared with a similar study made by the Cornell University Libraries under slightly different conditions for the Syracuse and the University of Buffalo libraries.

Unlike the study made by the Cornell University Libraries, the Bibliographic and Reference Center would search only the Cornell University catalogs using author, title, subject or any approach needed to find the material in that catalog.

The BARC staff would not search the National Union Catalog, Union List of Serials or any other Union Catalogs.

The University of Rochester's Technical Services Department supplied information on the item to be searched in the format most convenient for them--either 3 x 5 cards, order forms or xeroxed copies of title pages and other pages which would give the BARC searching staff enough data to search the Cornell catalog.

The BARC staff would search the requests from the University of Rochester as part of their regular routine No special attention or crash timing was to be given these requests.

The BARC staff would be responsible for determining time needed for the following steps:

1. Preparing the material for searching (sorting, filing, etc.)
2. Actual search
   - Locating card in dictionary catalog
   - Pulling card
   - Preparation of temporary card
   - Pulling and replacing file drawers
3. Batching for xerox
4. Xeroxing
5. Refiling
6. Mailing

The following analysis would be made of the material searched:

1. Type of material requested - monograph or serial
2. Language distribution
3. Chronological analysis - current or retrospective material

A count would then be kept of the number of items received; the number located in the Cornell University catalogs; the number for which main entries could be established although the Cornell University Libraries did not have the exact item; the number of items which could not be located at Cornell.

Time sheets were to be kept by both professional and non-professional staff members working on the project.

Split second timing with the aid of a stop watch was not used. Hours and minutes were recorded.

SEARCH STRATEGY

Professional librarian edited all items received noting main entry where language or other problems might handicap search by non-professional.

The first search was made under the most obvious entry. The searcher could then check title, subject or any other lead in order to locate exact match.

Searcher pulled card which was exact match.

Searcher would not pull temporary catalog card copy but provided the University of Rochester with essential catalog information from that card.

A temporary card was written out immediately by searcher to replace pulled card.

All cards were batched for xeroxing at the end of the day. Xeroxed copy was dispatched with search copy submitted by University of Rochester.

After xeroxing, BARC staff refiled Cornell catalog cards.

Any item for which the searcher could not find an entry or for which she had a problem was to be turned over to the professional.

PROBLEMS

The time of the search was undoubtedly affected by the size of the dictionary catalog, the access point to over three and one-half million books in the Cornell University Libraries. In a dictionary catalog of this size, filing as well as misfiling is a problem. Searchers were aware of the complexities of filing and brought several of the discrepancies in filing to the attention of technical services. This affected the search time.

One can expect that searching in the "U" section under "United States" and "United Nations" entries accounted for a slow-down in search time.

OBSERVATIONS BASED ON THE COMPARATIVE STUDY OF SEARCH TIME BY THE TECHNICAL SERVICES STAFF OF CORNELL UNIVERSITY AND SCRLC/BARC

On the basis of findings as indicated in Chart I we can assume that our findings are generally reliable since the time and cost figures arrived at in both studies were so closely related.

The caliber of the search staff used in both the Cornell search and in the BARC search was above average - both searchers were considered exceptional.

The differential in the length of time needed to locate an item - only 40 seconds - was so close, that we felt that we could safely generalize that in a catalog the size of Cornell's, that is, a dictionary catalog with entries for over three and one half million volumes and containing about fifteen million cards, it would take a searcher from one and one-half to two minutes to locate an entry. At this rate, in an eight-hour day, with no other responsibilities and barring talk time, fatigue, coffee breaks, etc., a searcher can locate between 31 and 34 searches per hour or 240 to 280 items per day. (It is possible that this amount would be increased with a divided catalog.)

However, since filing, xeroxing, distribution, etc. are elements in the search for which the BARC staff is responsible, we have included these times and costs in the study. On this basis, a completed search takes approximately five minutes. About 500 searches can be completed in a week.

The complexity of the items has an influence on search time. The BARC search contained 50 monographs, the remainder were serials. The titles searched were primarily in English with a scattering of French, German, Spanish and Russian language materials. Those titles for which card copy was not located contained the same scattering of languages. Corporate entry had to be established for a number of titles. Items which were not located were primarily government publications. Several OECD, United Nations and U.S. Documents which were not found in the dictionary catalog were subsequently located as in process in Cornell Technical Services. Several titles which were not located were in fields in which Cornell would not ordinarily buy.

Of the material searched by Cornell University Libraries' staff for Syracuse University and SUNY Buffalo we know only that these were monographs. An analysis by date was made by the BARC staff as well, and in both studies, the bulk of the material fell into the periods 1960-1963 and 1965-1969. No subject analysis of material was made for either study.

In the BARC study we were extremely anxious to determine how many more items could be located by the BARC professional. She located one dozen more items and a number of titles in process. The professional

facilitated the search by transliterating non-western language materials.

On the basis of both time studies we can generalize that it costs from eight to ten cents per unit to search the dictionary catalog by a non-professional. This variation is based on the cost per hour for labor and the number of items searched per hour. However, the cost for a completed search taking into consideration all elements such as mailing, filing and xeroxing copy or polaroid shots is a minimum of forty cents - no overhead included. It should be noted that the Bibliographic and Reference Center did not search the National Union Catalog. This was not part of its charge.

RECOMMENDATIONS

Although I sympathize with Mr. Ross's statement that searching for catalog copy at Cornell is "as close to a cave man's approach to the problem of shared cataloging as one can get," if a library can locate 50% of its cataloging card needs at Cornell, the search is worth the price.

However, the Council was simply asked to address itself to the question of whether the Bibliographic and Reference Center staff could perform a search for institutions in addition to its own. We believe that it can. The BARC staff can search from 300-350 additional titles per week. With the present staff it can search 2000-2300 titles per month.

We recommend that the charge shall be 50¢ per search. This will allow for any margin for error in computation.

Consideration might be given to the possibility of providing libraries with sets of cards ready for over-typing rather than just single copy.

A Study prepared by:
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Executive Director
South Central Research Library
Council
February 9, 1971

CHART I

COMPARISON OF TIME/COST STUDY ON SEARCHING
PREPARED BY CORNELL AND SCRLC/BARC STAFF

ELEMENTS	CUL* SYRACUSE	CUL* BUFFALO	BARC ROCHESTER
Size of sample	78	100	335
Number of items located	31 (39.7%)	49 (49%)	182 (54.3%)
Exact match	29 (37.1%)	41 (41%)	159 (47.5%)
Catalog card information or variant edition	2 (2.6%)	8 (8%)	23 (6.8%)
Total percentage located	39.7%	49%	54.3%
Search time			
1. Non-professional			
a. Sorting/alphabetizing	-	-	46 min.
b. Actual search	150 min.	185 min.	523 min.
c. Xeroxing/mailing	-	-	109 min.
d. Refiling	-	-	145 min.
Total: Complete search			823 min.
2. Professional			
a. Editing	-	-	37 min.
b. Problem searching (162 items)	-	-	414 min.
c. Other time (statistics, etc.)	-	-	146 min.
Total:			597 min.
Average time per unit search in CUL			
Non-professional	1.9 min.	1.85 min.	1.56 min.
Professional (problem search)	-	-	2.49 min.
Average time for complete unit search from editing to mailing	-	-	4.23 min.
Labor cost of searching Cornell cat.			
Non-Professional	$.078	$.076	$.091
(Labor cost per hour)	($2.47)	($2.47)	($3.50)
Professional	-	-	$.24
(Labor cost per hour)	-	-	($4.75)
Cost for complete search (Professional time and non-prof. from editing to completion)	-	-	$0.30
Cost per polaroid shot	$.22	$.22	not used
Cost per xerox copy	-	-	$0.10 per copy
Minimum cost per search	-	-	$0.40

(Dash indicates element not timed)

* Cornell University Libraries

UNIVERSITY OF ROCHESTER SEARCH

CHART II

Size of search	335	
Total no. items located		
Exact match	159	
Catalog card information	23	
Total not located	153	
Search time		
1.Non-professional		
a. Sorting/alphabetizing	46 min	(46 min)
b. Actual search	8 hrs 43 min	(523 min)
c. Xeroxing/mailing	1 hr 49 min	(109 min)
d. Refiling	2 hrs 25 min	(145 min)
Total:	13hrs 43 min	(823 min)
2.Professional		
a.Editing	37 min	(37 min)
b.Problem searching	6 hrs 54 min	(414 min)
c.Preparation of statistics	2 hrs 26 min	(146 min)
Total:	9 hrs 57 min	(597 min)
Average time per unit search in CUL		
Non-professional	1.56 min	
Professional (problem search)	2.49 min	
Average time for complete unit search from editing to mailing	4.23 min	
Percentage of work week spent on the search		
Non-professional	41%	
Professional	49%	
Labor cost		
Non-professional (base $3.50 per hr)		
1.Dictionary catalog search	$.091	
2.Complete search	.137	
Professional		
1.Problem searching	$.096	
2.Complete search	142	
Cost per search in Cornell catalog (Professional and non-professional)	$.30	
Minimum cost per search (Including card copy and mailing)	$.40	

CHART III

ANALYSIS OF ENTRIES BY DATE*

Year	Buffalo # Items	Syracuse # Items	Rochester # Items
1970			5
1969			18
1968	2	13	30
1967		16	12
1966	2	19	7
1965	1	2	9
1964	4	2	1
1963	18		3
1962	21	2	7
1961	10	4	1
1960	6	1	1
1959	2		1
1957	1		
1956	3	1	2
1955	4		1
1954	1		
1953	2		1
1952			1
1951	1		1
1950		1	
1949	1		
1948	1	1	1
1947	1		3
1946			2
1945		1	
1939	1		
1937	1		1
1936			1
1935		1	
1934	1	1	
1932		1	
1931	2		
1930	2		
1929	2		
1928	1		
1925	1		
1916		2	
1913	1		1
1906	1		
1901	1		
1889		1	
1887	1		
1880		1	
1851		1	
1794			2
1790			2
1761			1
ND			29

* Sampling

LANGUAGE DISTRIBUTION - ROCHESTER STUDY*

BR.	U.S.	FR.	GER.	IT.	SP.	RUS.
	3	2				
2	12	1	1	1	1	
3	24	2		1		
2	7	2				1
	6	1				
1	5		3			
	1					
	3					
	6		1			
	1					
	1					
	1					
			2			
	1					
	1					
					1	
	1					
		1				
	3					
	2					
	1					
	1					
			1			
		2				
		2				
				1		
1	24		3	1		

* Sampling